

24. SHEEP AS A NEW HOST OF THE TICK, *DERMACENTOR AURATUS* SUPINO (FAMILY IXODIDAE)¹

A collection of ticks made from sheep and sent to the Zoological Survey of India by Sri R. D. Katiyar, Assistant Disease Investigation Officer (Sheep & Goat), Animal Husbandry Department, U.P., Lucknow, has been identified as follows:

1. *Boophilus australis* (Fuller)
2. *Rhipicephalus haemaphysaloides* Supino
3. *Haemaphysalis bispinosa* Neumann
4. *Dermacentor auratus* Supino

The first three species are well-known for their occurrence on sheep and goat, while the last, *Dermacentor auratus* Supino, comprising a male and a female specimen collected from sheep at the Central Sheep and Wool Research Station, Pashulok-Rishikesh, Dehra Dun District (U.P.), in July 1954 is interesting in as much as it is recorded here for the first time from sheep.

Sharif (1928) commented on the taxonomy, distribution and hosts of *D. auratus*, and Sen (1938) has given an exhaustive list of hosts of this widely distributed Oriental species. In neither of the above-mentioned works nor in later literature is there any reference to sheep or goat as a host of *D. auratus*.

D. auratus is a well-known pest of wild animals and has been so far recorded from Borneo (off *Polamochoerus larvatus* F. Cuv.); Java (off *Sus vittatus* Temm.); Sumatra (off wild pig); Carin-chela and Mooleyet in Burma (off *Ursus torquatus* Wagn. and *Sus cristatus* Wagn.); Ceylon (off bear) and Nias (off pig). In India it is recorded from Nagabera, Goalpara District, Assam (off wild boar); Naihati, Bengal (off deer); Calcutta (off man); Singhbhum District, Bihar (off wild pig); Chandan Chowki (off *Felis pardus* Linn.) and Bhowali (found on the clothing of a man on his return from the jungle) both in the Naini Tal District, Uttar Pradesh; Songra in the Gonda District (off *Melursus ursinus*); Helvak, Koyna Valley (host unknown) and Nechal, Western Ghats (host unknown), both in the Satara District, Bombay State.

Its accidental transport or attachment from one host to another or even to the clothes of human beings traversing grazing land of wild animals is not unknown as will be evident from the distribution of the species and its hosts given above. However, in the present instance, as the specimens were collected from a controlled stock of sheep and as one of the specimens (female, length 9.5 mm. and width 7.8 mm.) was gorged with blood, we are led to think that it is also equally capable of sustaining itself on sheep.

Kouwenaar and Wolf (1934) were able to produce rickettsiosis experimentally in guinea-pig in Sumatra by inoculating suspensions of crushed examples of *Dermacentor auratus* Supino and *Rhipicephalus haemaphysaloides* Supino, collected from wild pigs. Sharif (1938) has identified on numerous occasions nymphs of *D. auratus* collected from man at the School of Tropical Medicine and Hygiene, Calcutta, and he suspects that *D. auratus* is the real vector of the tick-typhus fever

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in India and that *R. haemaphysaloides* may play some part in the transmission of the disease.

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ENTOMOLOGICAL ASSISTANT,
ZOOLOGICAL SURVEY OF INDIA,
CALCUTTA,
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G. MATHAI

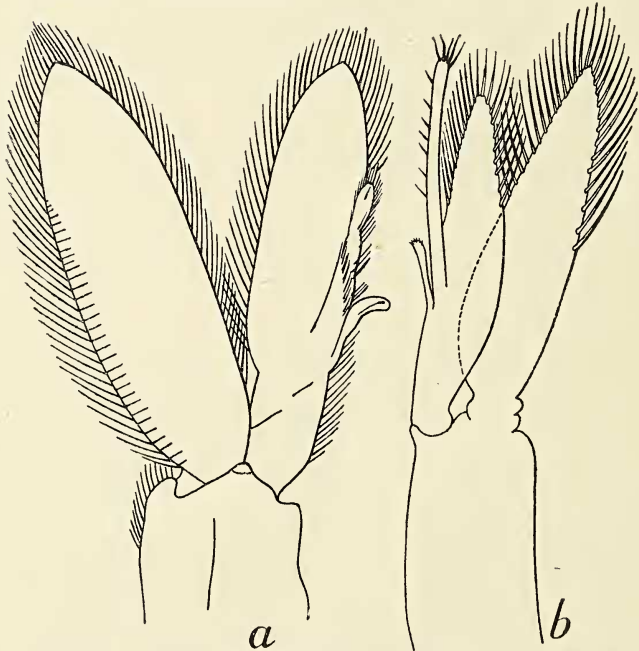
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 Kouwenaar, W. and Wolf, J. W. (1934): *Geneesk. Tijdschr. Ned. Ind.* 74: 1653.

25. APPENDIX MASCULINA OF *PALAEON LAMARREI*
H. MILNE-EDWARDS¹

(With a text-figure)

In all the known species of *Palaemon* Fabr. (= *Macrobrachium* Bate) the males are distinguished from females, in addition to other



Second pleopods in male of: (a) *Palaemon carcinus* (after Holthius), $\times 4$; (b) *Palaemon lamarrei*, $\times 20$.

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